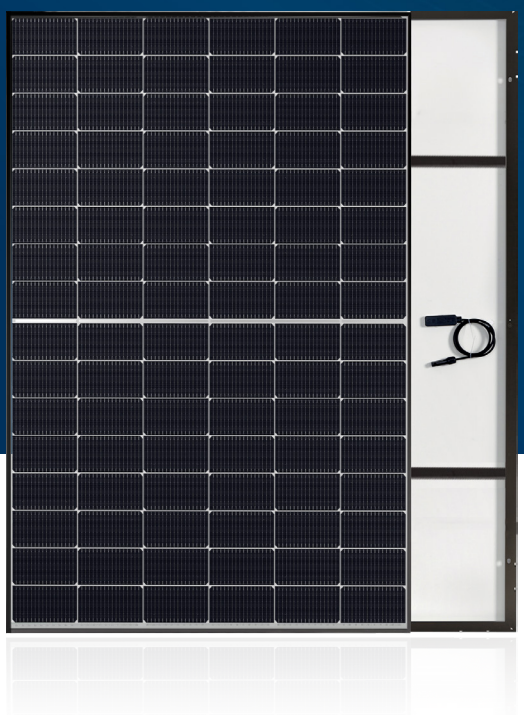
Silk® Rhino

FuturaSun® anticipate tomorrow



n-type | TECHNOLOGY INSIDE

455 W Maximum power

22.77 % Maximum efficiency

KEY BENEFITS AND FEATURES

- Power from **440** to **455 Watt**
- **High Hail resistance**, up to 50 mm hailstones diameter at 111 km/h
- Improved stiffness thanks to **two extra aluminum bars**
- 96 M10 HC **n-type** half-cut cells (G12R)
- Increased **glass thickness**
- 1762 x 1134 x 30 mm (mm)

Performance guarantee

- **25-years** performance warranty with max power decrease from 2nd year **0.4%**/year
- **99%** at the end of first year
- **91.4%** at the end of 20th year
- **89.4%** at the end of 25th year

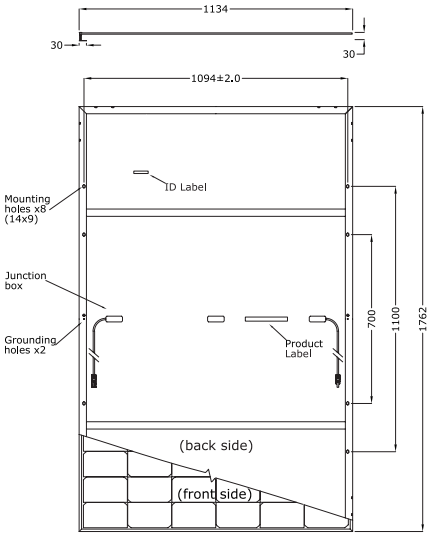
Product guarantees

- **15-year** product warranty
- Third-party product **liability** insurance
- All FuturaSun's modules are designed and guaranteed by the **Italian** headquarters

All images shown are for illustration purpose only, product appearance may vary according to the installation, light and ambient reflection.

Mechanical Specifications

Dimensions	1762 x 1134 x 30 mm
Weight	26.6 kg
Glass	High transmission, Low iron, Tempered, ARC, Thickness 4 mm
Cells	96 monocrystalline half-cut MBB n-type cells 182 x 105 mm
Frame	Anodized aluminium frame with mounting and drainage holes
Junction boxes	Certified according to IEC 62790, IP 68 approved, 3 bypass diodes
Cables	Solar cable 4mm², length 1100 mm or customized with connectors type Suzhou Xtong PV-XT101.2
Backsheet	Composite Multilayer film - white
Maximum reverse current (Ir)	25 A
Maximum system voltage	1500 V
Mechanical load (snow)	Design load: +1600 Pa, (+2400 Pa including safety factor 1.5)
Mechanical load (wind)	Design load: -1600 Pa, (-2400 Pa including safety factor 1.5)



Note: dimensions in mm, tolerance +/- 2 mm

Electrical data - STC*		FU440MV Silk Rhino	FU445MV Silk Rhino	FU450MV Silk Rhino	FU455MV Silk Rhino
Sorting tolerance	W	0~+5			
Module power (Pmax)	W	440	445	450	455
Open circuit voltage (Voc)	V	35.14	35.30	35.47	35.63
Short circuit current (Isc)	A	15.85	15.91	15.97	16.02
Maximum power voltage (Vmpp)	V	29.62	29.81	30.01	30.17
Maximum power current (Impp)	A	14.86	14.93	15.00	15.08
Module efficiency	%	22.02	22.27	22.52	22.77

Electrical data - NOCT**		FU440MV Silk Rhino	FU445M Silk Rhino	FU450M Silk Rhino	FU455M Silk Rhino
Module power (Pmax)	W	331	335	338	342
Open circuit voltage (Voc)	V	33.40	33.56	33.72	33.87
Short circuit current (Isc)	A	12.79	12.84	12.90	12.95
Maximum power voltage (Vmpp)	V	27.57	27.75	27.89	28.00
Maximum power current (Impp)	A	12.00	12.06	12.12	12.19

Temperature ratings

Temperature coefficient Isc	%/°C	0.045
Temperature coefficient Voc	%/°C	-0.25
Temperature coefficient Pmax	%/°C	-0.29
NOCT**	°C	45 ± 2
Operating temperature	°C	from -40 to +85
Module (T98) max	°C	70

Certifications

Factory	ISO 9001 - 14001 - 45001
Product	IEC 61215, IEC 61730, Fire ratig Class C, HW5 hail resistance class

Packaging

Quantity / Pallet	36 pcs
Container 40' HC	936 pcs / 26 pallets

*Standard Test Conditions STC: 1000 W/m² - AM 1.5 - 25 °C - tolerance: Pmax (±3%). Voc (±4%). Isc (±5%)
**Nominal Operating Cell Temperature NOCT: 800 W/m² - T=45 °C - AM 1.5

Product Made in P.R.C.
AUS_02

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For detailed information, please refer to the installation manual